



National Child Care Information Center

A service of the Child Care Bureau



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COST-BENEFIT ANALYSIS of QUALITY CHILD CARE

The following publications have information about analyses of the costs and benefits of investing in quality early childhood programs.

■ *Early Childhood Education: How Important Are the Cost-Savings to the School System?* (February 2004), by Clive R. Belfield, uses a balance sheet framework that compares costs with benefits to evaluate investments in early childhood education in New York. The medium-term benefits or cost-savings from early childhood education include: (1) reducing the incidence of special education; (2) preventing grade repetition; (3) improving educational productivity; and (4) enhancing children's well-being. Using conservative assumptions and data from high-quality published studies, present value cost-savings are estimated ranging from \$2,591–\$9,547 per child participating in the program. The medium-term cost-savings to New York State are estimated from investment in a universal early childhood education program. The cost-offset to the school system is calculated from investment in universal early childhood education. Medium-term cost-savings offset between 41 percent and 62 percent of the total expenditures on early childhood education programs. The long-term benefits of a sound basic education are addressed. Appendices include discussions of peer effects and of cost functions and student achievement. This resource is available on the Web at http://www.winningbeginningny.org/databank/documents/belfield_report_000.pdf.

■ *Early Childhood Development: Economic Development with a High Public Return* (March 2003), by Art Rolnick and Rob Grunewald, Federal Reserve Bank of Minneapolis, discusses the economic case for public funding of early childhood development. It cites studies that document that well-focused investments in early childhood development yield high public and private returns. The authors propose that the Minnesota State government should create the Minnesota Foundation for Early Childhood Development to fill the gap between the funds currently available for early childhood family education, school readiness, and Head Start and the amount necessary to fully fund a high-quality program for all 3- and 4-year-old children living in poverty in Minnesota. This resource is available on the Web at <http://minneapolisfed.org/research/studies/earlychild/earlychild.pdf>.

■ *The Economics of Education: Public Benefits of High-Quality Preschool Education for Low-Income Children* (2003), by Jerrold Oppenheim and Theo MacGregor, developed for Entergy by Building Communities for Change, articulates and analyzes the economic benefits of providing a high-quality preschool education to all low-income 3- and 4-year-olds in the United States, and especially in the Entergy States of Arkansas, Louisiana, Mississippi, and Texas. This resource is available on the Web at http://www.state.ar.us/childcare/education_book.pdf.

■ *Investing Today for Tomorrow: The Costs and Benefits of Early Childhood Care and Education* (2003), by University of Pittsburgh Office of Child Development, suggests that high-quality early childhood care and education more than pays for itself when the costs of successful programs are weighed against short- and long-term outcomes that benefit children, families, communities, and taxpayers. Studies suggest that the cost of many high-quality early childhood care and education programs compare favorably to the cost paid for public education. Certain characteristics of high-quality programs tend to drive up the cost of early childhood services. These include: a more highly educated staff, more favorable staff-child ratios, and lower turnover. The level of quality is critical. Evidence of how cost-effective high-quality early childhood programs can be is found among several programs that are considered best practices and have undergone thorough evaluation: The Abecedarian Project, the Prenatal/Early Infancy Project, and Chicago Child-Parent Centers. High-quality early childhood care and education is associated with the following outcomes: improved school readiness, better school performance, higher graduation rates, lower crime and delinquency, and decreased welfare dependency. When cost-benefit ratios are calculated, best practices early childhood programs return \$4 to \$7 in benefits to families and communities for every \$1 that was invested in them. Studies suggest that mediocre and poor-quality early childhood services have little or no effect on cognitive and social development, health, school success, crime and delinquency, and other key child outcomes. This resource is available on the Web at <http://www.education.pitt.edu/ocd/publications/sr2003-06.pdf>.

■ *A Benefit-Cost Analysis of the Abecedarian Early Childhood Intervention* (2002), by Leonard N. Masse and W. Steven Barnett, National Institute of Early Education Research (NIEER), reports on a cost-benefit analysis of the Abecedarian Early Childhood Intervention project in North Carolina. The research assessed whether the cost to society was worth the benefits. It found that taxpayers received a four-to-one return on their investment, in addition to significant social dividends and including better school success. The study also shows significantly higher lifetime earnings for both the children and their mothers. This resource is available on the Web at <http://nieer.org/resources/research/AbecedarianStudy.pdf>.

■ *The Costs and Benefits of After School Programs: The Estimated Effects of the After School Education and Safety Program Act of 2002* (September 2002), eds. William O. Brown, Steven B. Frates, Ian S. Rudge, and Richard L. Tradewell, provides the first in-depth cost/benefit analysis of the After School Education and Safety Program Act of 2002. The Act expands funding to after-school programs in California by \$433 million to reach approximately 485,000 additional students when fully implemented. Each dollar invested in an at-risk child brings a return of \$8.92 to \$12.90. Most of this benefit is derived from diverting a relatively small portion of at-risk youngsters from a future path of crime. Key components of the analysis include: (1) a comprehensive review of existing literature on after-school and similar diversion programs both in California and throughout the nation; (2) an examination of the limitations of existing research; (3) a Sensitivity Analysis indicating that, even excluding crime reduction benefits, the Act is cost effective; and (4) a discussion of the relative benefits to taxpayers, crime victims, and individual participants if the Act is implemented. Data demonstrate that even moderate success in affecting the at-risk participants' future social and economic outcomes yields significant benefits to taxpayers, crime victims, and program participants. This resource is available on the Web at http://rose.claremontmckenna.edu/publications/pdf/after_school.pdf.

■ *Age 21 Cost-Benefit Analysis of the Title I Chicago Child-Parent Centers* (February 2002), by Arthur J. Reynolds, Judy A. Temple, Dylan L. Robertson, and Emily A. Mann, for the Institute for Research on Poverty, describes the cost-benefit analysis of a Federally financed, comprehensive early childhood program. It states:

The Title I Chicago Child-Parent Centers are located in public schools and provide educational and family support services to low-income children from ages 3 to 9. Using data from a cohort of children born in 1980 who participate in the Chicago Longitudinal Study, findings indicated that the measured and projected economic benefits of preschool participation, school-age participation, and extended program participation exceeded costs. The preschool program provided a return to society of \$7.14 per dollar invested by increasing economic well-being and tax revenues, and by reducing public expenditures for remedial education, criminal justice treatment, and crime victims. The extended intervention program (4 to 6 years of participation) provided a return to society of \$6.11 per dollar invested while the school-age program yielded a return of \$1.66 per dollar invested. Economic benefits to the general public, exclusive of individual earnings, also exceeded costs for all three levels of program participation. Findings demonstrate the cost-effectiveness of public early childhood programs. (Abstract)

This resource is available on the Web at <http://www.ssc.wisc.edu/irp/pubs/dp124502.pdf>.

■ *Effects Five Years Later: The Michigan School Readiness Program Evaluation Through Age 10* (January 2002), by Zongping Xiang and Larry Schweinhart, High/Scope Educational Research Foundation, examines whether children who participated in the Michigan School Readiness Program (MSRP)—Michigan’s preschool program for 4-year-olds who are at risk for school failure—are better prepared when they enter school, and continue to do better academically five years later. It states:

Compared to their classmates of similar age and socioeconomic background who did not attend the program, 24% more MSRP participants passed the Michigan Educational Assessment Program (MEAP) literacy test for grade four and 16% more passed the mathematics test. In addition, 35% fewer participants needed to repeat a grade, as shown in Figure A. Based on these numbers, this program annually prevents an estimated 1,700 Michigan children from having to repeat a grade, saving the state an estimated \$11 million each year by this effect alone. (page i)

This resource is available on the Web at <http://www.highscope.org/Research/MsrpEvaluation/msrp-Age10-2.pdf>.

■ *The ABCs of Early Childhood: Trends, Information, and Evidence for Use in Developing an Early Childhood System of Care and Education* (1999), by Iowa Forum for Children and Families, describes the reasons for developing an early childhood system of care and education

in Iowa. Components of a comprehensive early childhood system of care and education are described. Chapters include: (1) “Growth in Workforce Participation”; (2) “Trends in Child Well-Being”; (3) “Brain Development Research”; (4) “Cost-Benefits of Early Care and Education”; (5) “Health Care”; (6) “Family Support, Parenting Education, Home Visiting, and Family Literacy Services”; (7) “Preschool Programs”; and (8) “Child Care/Education.” Some employers have more capacity to provide specific benefits than others. Larger employers are more likely than smaller employers to develop formal structures around flexible benefit plans or onsite day care. Businesspersons can be leaders in advocating for high-quality, affordable, and available early childhood services. Employers have a stake in early childhood both in the present and in the future. They need employees who can be effective workers, which requires that their parenting responsibilities are addressed. They also need to ensure that the workforce for the next millennium has the skills and work habits to continue economic growth, starting with the assurance that all children start school ready to learn. This resource is available on the Web at <http://www.cfpciowa.org/pdf/ABCs.pdf>.

■ *Investing in Our Children: What We Know and Don’t Know About the Costs and Benefits of Early Childhood Interventions* (1998), by L. Karoly, P. Greenwood, S. Everingham, J. Hoube, R. Kilburn, P. Rydell, M. Sanders, and J. Chiesa, published by RAND. Chapter III analyzes two programs documented in the literature that are amenable to a cost-savings analysis: the Elmira Prenatal/Early Infancy Project (PEIP) and the Perry Preschool. The report notes:

Early childhood intervention programs generate at least four types of significant savings to government:

- Increased tax revenues. These result from increased employment and earnings by program participants, including income tax at the federal and State levels, Social Security contributions by both the employer and employee, and State and local sales taxes. The Perry Preschool program measured the increased employment and income for the children in the evaluation through age 27, and Barnett (1993) projected future earnings and income through age 65. The employment and earnings measures in the Elmira PEIP are limited to gains experienced by the mother through age 15 of the child.
- Decreased welfare outlays, including Medicaid, Food Stamps, and Aid to Families with Dependent Children (AFDC), and general assistance (typically funded by counties). The savings to government include not only the reduced payments to recipients but also the reduced administrative expenses. The Perry Preschool evaluation took account of all of these factors, measuring welfare utilization effects for the children through age 27 and projecting future savings through age 65 based on Barnett’s (1993) calculations. The Elmira PEIP measured changes in months spent on welfare by the mother (and child) through age 15 of the child.
- Reduced expenditures for education, health, and other services. Examples are special education, emergency room visits, and stays in homeless shelters. The Elmira PEIP evaluation measured emergency room visits when the child was

between the ages of 25 and 50 months. The Perry Preschool program evaluation measured net education savings through when the child was in high school (i.e., savings due to lower special education expenditures and less grade repetition net of increased schooling costs due to greater educational attainment). To the extent that the programs reduce the need for other special services that were Comparing Costs, Savings, and Benefits not measured in the evaluations, the savings figure is an underestimate of the true savings to government.

- Lower criminal justice system costs, including arrest, adjudication, and incarceration expenses. On the basis of the measured outcomes, we can predict criminal activity and thus criminal justice expenditures for the lifetime of the subject; therefore, the estimate of criminal justice savings covers the entire lifetime of the children in the Elmira PEIP and Perry Preschool interventions. In addition, the criminal justice system savings for mothers in the Elmira PEIP are included based on treatment- versus control-group differences in arrests and jail days through when the focal child was 15. (pp. 84–85)

This resource is available on the Web at <http://www.rand.org/publications/MR/MR898/>.

■ *The Benefits and Costs of Good Child Care: The Economic Rationale for Public Investment in Young Children: A Policy Study* (March 1998), by Gordon Cleveland and Michael Krashinsky, published by Childcare Resource and Research Unit Centre for Urban and Community Studies, University of Toronto, details an assessment of the economic impact of a major investment of public money in good quality child care for Canadian children 2 to 5 years of age. It considers the economy-wide employment effects and the macroeconomic effects of potential child care programs. The conclusions note that the incremental benefits of the identified changes to child care arrangements in Canada amount to approximately \$2.00 for every \$1.00 of cost to the public purse. This resource is available on the Web at <http://www.childcarecanada.org/pubs/other/benefits/>.

■ *Rhode Island Kids Count Issue Brief—Cost-Benefit of Early Childhood Programs* (1998), by Rhode Island Kids Count, summarizes research on educational and economic benefits of Early Childhood Programs. This resource is available on the Web at <http://www.rikidscount.org/rikc/DisplayLinksPage.asp?PageID=118&PageName=PubRepIssueBriefSeries&LinksPageID=300>.

ADDITIONAL RESOURCES

■ “Appendix 3: Cost Benefit Analysis—a Step by Step Example” (January 2003), in *Employer-Supported Child Care in Oregon: A Tool Kit*, by the Oregon Child Care Information Partnership, includes strategies for calculating employee turnover costs and costs of absenteeism. This appendix is available on the Web at http://www.oregonemployersofchoice.org/pdf/section_5. The complete toolkit is available on the Web at <http://www.oregonemployersofchoice.org/toolkit.html>.

■ *The Economic Rationale for Investing in Children: A Focus on Child Care* (September 2001), by Diane Paulsell, for Mathematica Policy Research, Inc., summarizes a conference convened by the Office of the Assistant Secretary for Planning and Evaluation (ASPE) to engage a multidisciplinary group of economists, developmental psychologists, child care researchers, and policy analysts in a dialogue about the rationale for public investment in quality child care. This resource is available on the Web at <http://www.mathematica-mpr.com/publications/PDFs/econrationale.pdf>. For additional information contact Mathematica Policy Research, Inc. at 609-799-3535.

■ “Cost-Benefit Analysis: A Step-by-Step Example” in the *Employer Toolkit Template* (1999), by the Child Care Partnership Project, is a tool to help employers calculate the cost of employees leaving and absenteeism due to dependent care or other work/life issues. This resource is available on the Web at <http://nccic.org/ccpartnerships/toolkit/pdf/pulout2a.pdf>.

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